

COPPERWOOD STAGE 2



OUTLINE PLAN

"A GREAT PLACE TO GROW"



Approved by the Municipal Planning Commission September 11, 2012
Amendment approved by City Council September 13, 2022

COPPERWOOD STAGE 2 OUTLINE PLAN

July **2022**

Prepared for
DAYTONA URBAN DEVELOPMENT CORP.
Lethbridge, Alberta

Prepared by
STANTEC CONSULTING LTD.
Lethbridge, Alberta

Project No. 112944453

Table of Contents

TABLE OF CONTENTS.....	i
1 INTRODUCTION	1
2 LOCATION & AREA CONTEXT	2
2.1 LOCATION	2
2.2 TOPOGRAPHY	2
2.3 EXISTING LAND USE & ZONING	2
2.4 FUTURE SHADOW PLANNING	2
2.5 EXISTING GROUND DISTURBANCE	3
3 LAND OWNERSHIP	4
4 POLICY CONTEXT	5
5 COMMUNITY VISION & DESIGN	8
5.1 COMMUNITY VISION	8
5.2 COMMUNITY DESIGN	8
6 OPEN SPACE LAND USE	10
6.1 OPEN SPACE	10
6.2 CONNECTIVITY	11
6.3 RESERVE DEDICATION ANALYSIS	11
6.4 SEASONAL WET AREAS	11
6.5 WATER QUALITY	11
7 LAND USE & DENSITY	12
7.1 LAND USE SUMMARY	12
8 ARCHITECTURAL STANDARDS	15
9 TRANSPORTATION	16
9.1 ARTERIAL ROAD DEVELOPMENT	16
9.2 ROAD CLASSIFICATIONS	16
9.3 ROUND ABOUTS	16

9.4	TRANSPORTATION IMPACT ASSESSMENT.....	17
10	TRANSIT & MAILBOX SERVICES	18
10.1	TRANSIT ROUTES	18
10.2	COMMUNITY MAIL BOX LOCATIONS	18
11	SITE SERVICING	19
11.1	STORM WATER MANAGEMENT	19
11.3	WATER SERVICING	24
11.4	EXISTING INFRASTRUCTURE	25
12	DEVELOPMENT STAGING	26
13	FIRE PROTECTION	29
14	SUSTAINABILITY	30
15	CONCLUSION.....	31
APPENDIX A	Certificates of Title	
APPENDIX B	Transportation Impact Assessment	
APPENDIX C	Geotechnical Evaluation	
APPENDIX D	Phase 1 Environmental Site Assessment Phase 1 ESA Supplementary Information	
APPENDIX E	Historical Resources Impact Assessment	
APPENDIX F	Lethbridge Northern Irrigation District Water Conveyance Letter	
APPENDIX G	Lethbridge School District Site Layout	
APPENDIX H	High Intensity Fire Response Analysis City of Lethbridge Sign-Off	
APPENDIX I	Gate 1 Sign-Off and Document	
APPENDIX J	Gate 2 Sign-Off and Document	
APPENDIX K	Gate 3 Sign-Off	

1 INTRODUCTION

The City of Lethbridge is experiencing significant growth in its western sector, a trend that is expected to continue in the foreseeable future. In response to the lifestyle opportunities this area of the city offers, Daytona Urban Development Corp. has provided a comprehensively designed plan for Stage 2 of Copperwood. The design of the Outline Plan conforms to the policies and intent of the West Lethbridge Phase 2 Area Structure Plan.

To accommodate a variety of market sectors and lifestyles, a mixture of housing alternatives is offered within the Outline Plan area. The community is primarily low-density single-detached housing, and medium-density multi-family sites.

2 LOCATION & AREA CONTEXT

2.1 LOCATION

The subject application, on behalf of Daytona Urban Development Corp., is for an Outline Plan approval by the Municipal Planning Commission.

The Copperwood Stage 2 Outline Plan encompasses 61.7 ha± (152.6 ac±) and provides a logical extension of Copperwood Stage 1 and other residential development in the western sector of the City of Lethbridge. The design is in accordance with the policies and intent of the West Lethbridge Phase 2 Area Structure Plan.

The City of Lethbridge and Daytona Urban Development in conjunction with the local residents have worked together to create the community of Copperwood.

2.2 TOPOGRAPHY

Copperwood Stage 2 topography is defined by hummocky terrain with an overall elevation difference of 11 meters. Existing ground contours have been presented on Figure 2.1 Area Context Plan. The plan area currently drains to the southwest and east and key high and low points are identified on **Figure 2.1 Area Context Plan**.

2.3 EXISTING LAND USE & ZONING

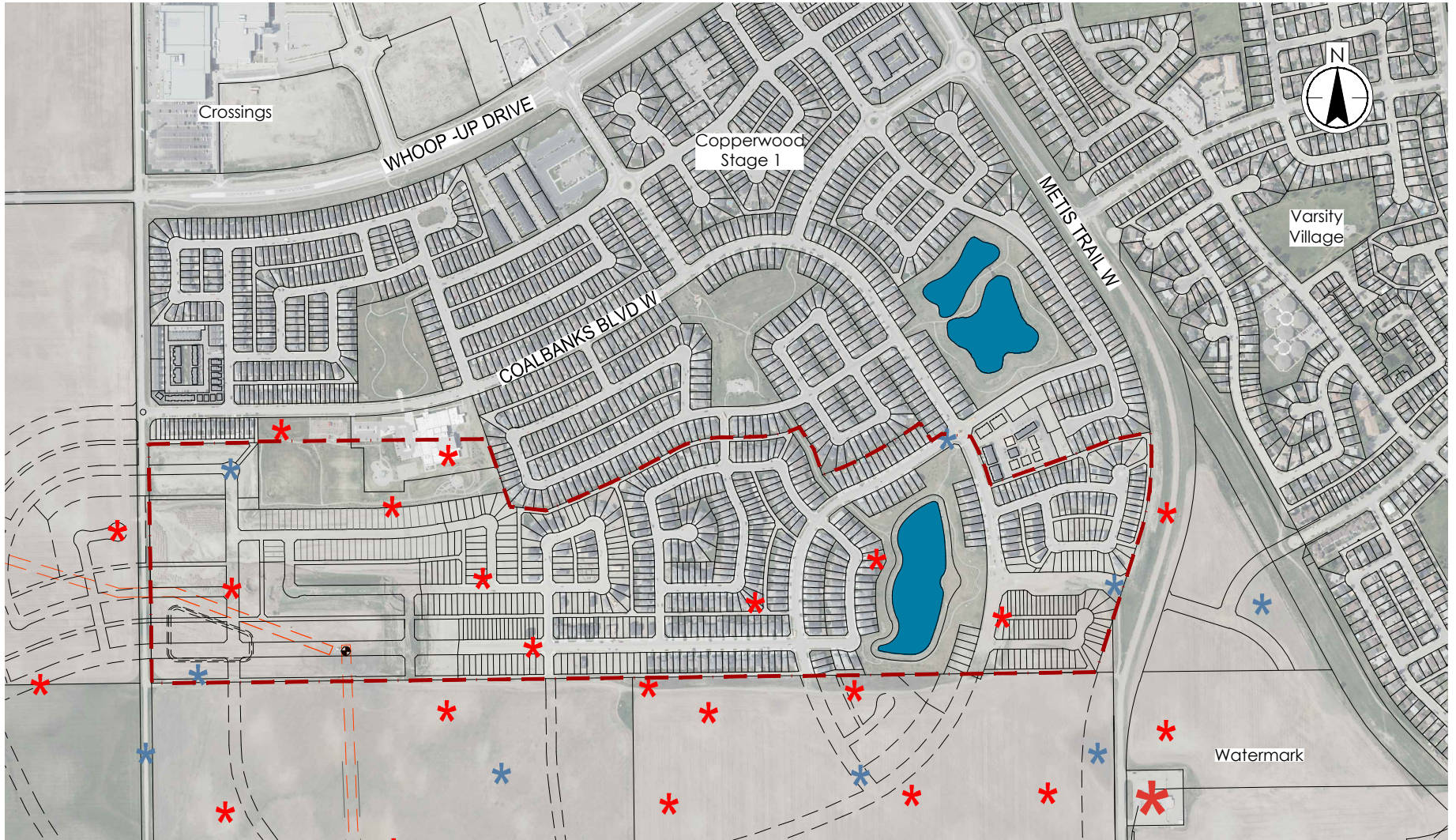
The existing land use is currently agricultural and City zoning is Future Urban Development.

2.4 FUTURE SHADOW PLANNING

Figure 2.2 Future Concept Plan, identifies conceptual collector and arterial roads to the west and south of Stage 2. Existing ground contours have been added to this figure to identify localized drainage patterns. Please refer to **Appendix J Gate 2 Sign-off and Document** for the relationship of Copperwood Stage 2 and the West Lethbridge Phase II Area Structure Plan.

2.5 EXISTING GROUND DISTURBANCE

Particular attention should be given to areas of existing development (farmsteads, dugouts, existing underground utilities, septic fields, solid waste pits and/or burn pits, etc.) Existing dugouts should be drained, all saturated material removed and backfilled with general engineered fill. At subdivision and detail design these features (dugouts and wetlands) will be identified and remediated under the supervision of a geotechnical engineer. All existing utilities (whether operational or abandoned) must be located. Existing utility trenches pose a particular risk due to settlement of backfill material. Care should be taken to ensure that all existing utility trenches are excavated to remove the utility and backfilled with general engineered fill. All other existing or historical ground disturbances should be removed and backfilled with general engineered fill. For further information refer to **Appendix C, Geotechnical Evaluation.**



NTS

FIGURE 2.1 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT
Area Context Plan

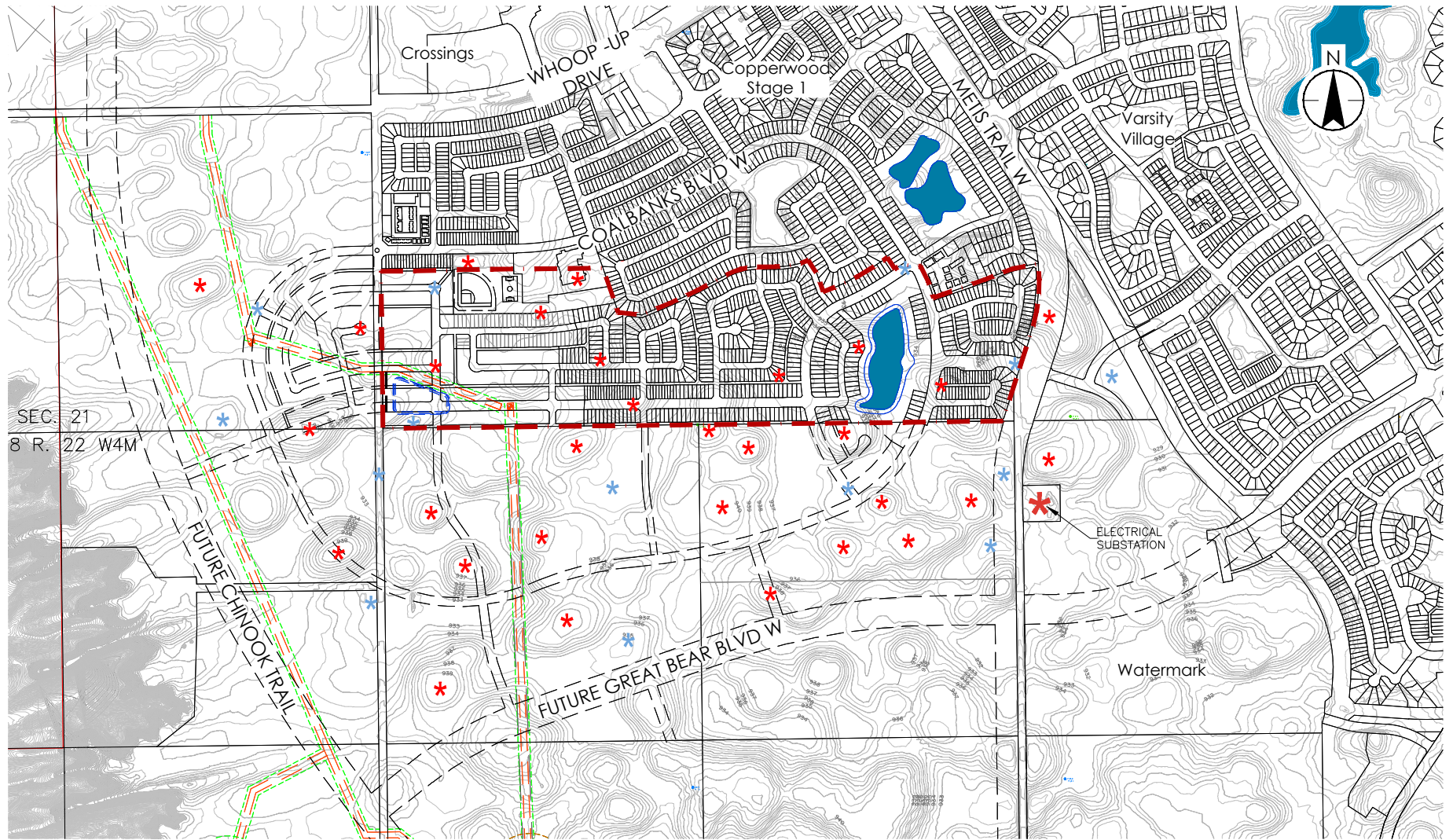
PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

Legend

- - - - - Copperwood Stage 2 Boundary
- - - - - Gas Line Easement
- * Gas Well
- * High Point
- * Low Point



112944453/116549024
 June 26, 2022



NTS

FIGURE 2.2 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Future Area Context Plan

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

- Legend
- · — Copperwood Stage 2 Boundary
 - - - Gas Line Easement
 - * Gas Well
 - * High Point
 - * Low Point
 - - - - Conceptual Roadways



116549024.500.100
June 26, 2022

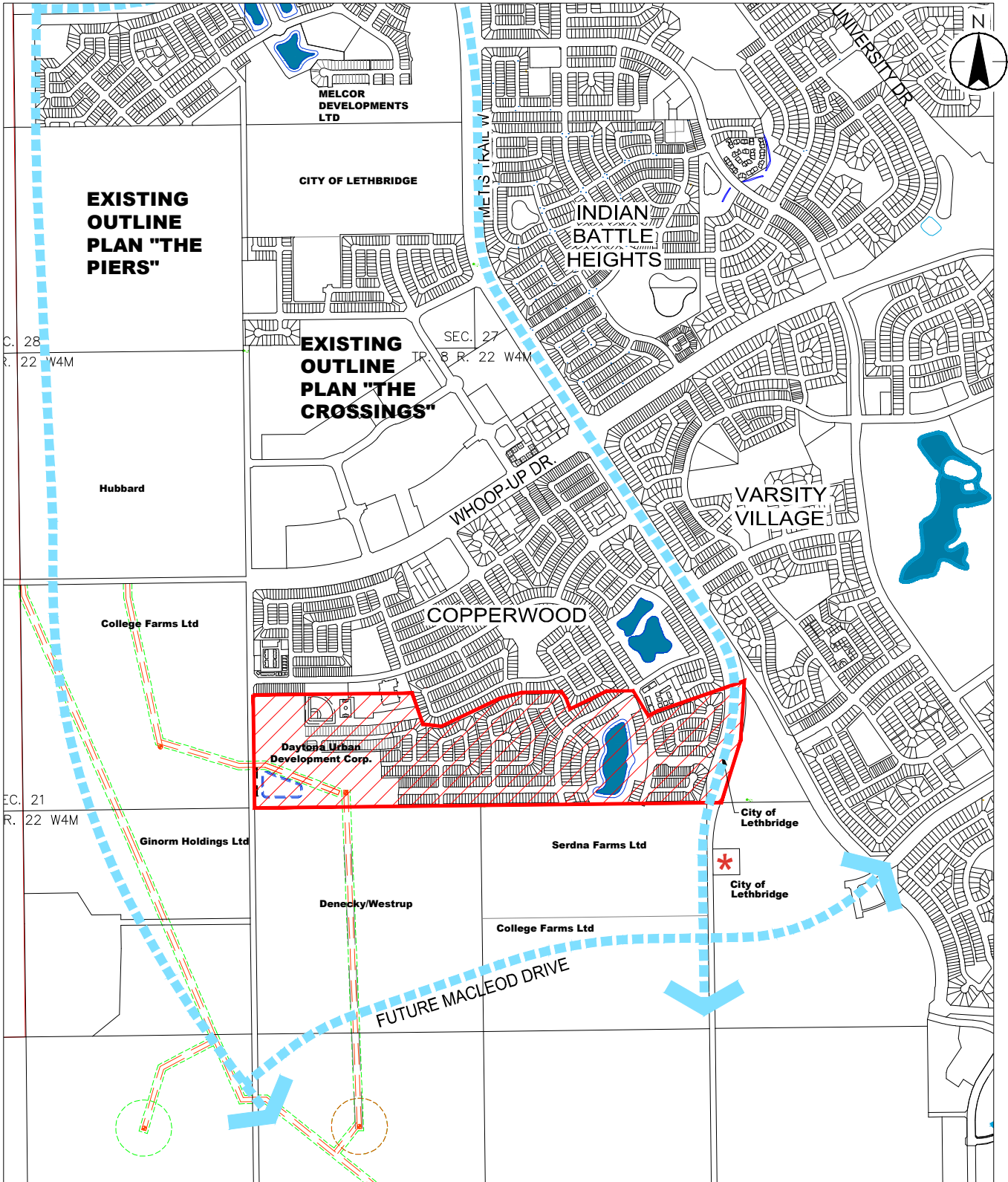
3 LAND OWNERSHIP

The Copperwood Outline Plan area consists of three separate titles under the ownership of Daytona Urban Development Corp. and a single title presently owned by the City of Lethbridge. An agreement for purchase is in place for the parcel owned by the City of Lethbridge and the acreage reflected below identifies only that portion that will be transferred to Daytona Urban Development Corp. The following indicates the legal descriptions for these parcels:

- Daytona Urban Development Corp. - Portion of the North East Quarter of Section 22, Township 8, Range 22, West of the Fourth Meridian containing 14.10 ha± (34.85 acres±).
- Daytona Urban Development Corp. - Portion of the North West Quarter of Section 22, Township 8, Range 22, West of the Fourth Meridian containing 30.10 ha± (74.48 acres±).
- Daytona Urban Development Corp. - Lot 2, Block 101, Plan 1012738 in the North East Quarter of Section 22, Township 8, Range 22, West of the Fourth Meridian containing 16.19 ha± (40.0 acres±).
- City of Lethbridge - Portion of the North West Quarter of Section 23, Township 8, Range 22, West of the Fourth Meridian containing 1.32 ha± (3.27 acres±)

The Certificates of Title have been provided in **Appendix A – Certificates of Title**.

Figure 3.1 Land Ownership identifies the ownership within the plan boundary.



NTS

FIGURE 3.1 COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Legend
 Copperwood Stage II

Ownership Plan



112944453/116549024
 June 26, 2022

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

4 POLICY CONTEXT

The Copperwood Stage 2 Outline Plan represents a continuation of the planning and development process that was initiated with the Stage I Outline plan of 2006. The Stage II Outline Plan conforms to the overarching planning document that guides the growth of this portion of West Lethbridge – the West Lethbridge Phase II Area Structure Plan (ASP). In its Land Use Concept chapter, this ASP identified a number of principles and objectives to direct the long term development of the new “villages” in this sector of the City. The planning principles that are used in this Outline Plan are based largely on those of the ASP. Additionally, this Outline Plan recognizes the relevance of the City’s Integrated Community Sustainability Plan/Municipal Development Plan (ICSP/MDP). Where the principles of this City wide document are appropriate, they have also been noted and incorporated in the Copperwood Stage 2 Outline Plan.

The policy context, related principles and their relationship to the planning and development of the Copperwood Stage 2 Outline Plan are as follows:

1. ICSP/MDP Policy: Encourage and promote growth patterns that maximize the use of existing infrastructure and services in order to avoid or delay the construction of new infrastructure. *(Section 6.4.4.5)*

1.1 ASP Principle: Provide a framework that will facilitate financial viability of future development through the orderly and economic extension of services and strategic allocation of land uses.

The Copperwood Stage 2 Outline Plan takes into consideration the importance of utilizing existing infrastructure to develop a logical and economic pattern of land uses. Examples of this include the utilization of the existing sanitary trunk mains in Whoop-Up Drive and Metis Trail and the provision of potable water to the Plan area via the existing water reservoir and pumping station in Varsity Village. The stormwater management plan defines its catchment areas by natural topography in order to minimize earthwork requirements and costs, and, at the same time, ensure that drainage is properly handled. The Copperwood Stage 2 Outline Plan also ensures that roadway planning is consistent with future connections to the City’s future **Watermark** ASP and subsequent Outline Plans.

2. ICSP/MDP Policy: Develop and maintain a sidewalk and pathway network that encourage safe, efficient comfortable movement options for all residents. *(Section 6.4.3.2)*

2.1 ASP Principle: Promote walkability by creating functional, safe and attractive pedestrian environments.

The Outline Plan provides for an integrated network of walkways and sidewalks that connect to significant open space sites. These destination sites – a dry

pond/playground area in Stage 1, a 6 ha public elementary school site and a combined wet pond/open space in Stage 2 - are all easily and conveniently reached via the sidewalk and pathway system that this plan offers. The system has also been designed in order that pedestrians from future development phases will have efficient access to these public spaces.

3. ICSP/MDP Policy: Encourage and promote a diverse range of housing that is incorporated in all new neighbourhoods. (Section 6.4.5.6)

3.1 ASP Principle: Foster integrated neighbourhoods that encourage a wide range of housing choice for different age and income groups.

The density range incorporates both low and medium densities and includes R-CL, R-M and R-75 zoning categories under the City's Land Use By-law. This range permits single family homes, two family dwellings as well as town housing and apartment units.

4. ICSP/MDP Policy: Develop an integrated multi-modal transportation system. (Section 6.4.2.4)

4.1 ASP Principle: Provide a logical, safe and efficient hierarchy of transportation systems within the ASP area to address the public transit, private automobile, and truck movement, pedestrian and bicycle transportation needs of residents and businesses.

The transportation system follows the general hierarchical roadway pattern developed in West Lethbridge Phase II Area Structure Plan and Stage I of the Copperwood Outline Plan. The roadways within the Stage 2 Plan are organized to facilitate movement in a safe efficient manner within the plan area and to ensure co-ordination with the existing and future roadways of the adjacent lands. The safety of the transportation system will be enhanced through the provision of safe intersections and appropriate calming features.

The plan accommodates the possibility of public transit through the Outline Plan area. Efforts to provide public transit, as needed, will be co-ordinated via the City's bussing arm- Lethbridge Transit.

The Outline Plan provides alternatives to automobile use by the provision of the extended bicycle/pedestrian pathway system from Stage I and sidewalks to permit access to key open space sites.

- 5. ICSP/MDP Policy:** Encourage and promote the creation of city and neighbourhood focal points that provide opportunities for community gathering. *(Section 6.4.5.9)*

- 5.1 ASP Principle:** Create a sense of place that adds visual interest and fosters social interaction, where people want to spend time.

The Stage 2 Copperwood Outline Plan is part of a larger ASP which identifies prominent area-wide sites as focal and meeting places. The proposed public elementary school site in Stage 2 represents one of these key focal points offering a significant opportunity for education, sporting activities and social events.

The Neighbourhood and Linear Parks will offer residents additional opportunities for both passive and active engagement through conversational enlightenment at interpretive nodes, casual or challenging exercise on connective pathway circuits, or relaxed mingling and visiting at the shelter/meeting area. Landscape treatments in all areas will enhance the plan's sense of community through Crime Protection Through Environmental Design (CPTED) safety standards and softscape amenities reflected in both stages of Copperwood.

- 6. ICSP/MDP Policy:** Incorporate a range of active and passive recreational opportunities into the open space system. *(Section 6.4.6.2)*

- 6.1 ASP Principle:** Design attractive and functional open spaces.

The Stage II Copperwood Plan will include playfields within the elementary school property, which will conveniently serve both the needs of the immediate neighbourhood as well as the larger village community.

Stage II will include a new wet pond at the eastern end of the Plan area. In addition to its storm management function, this facility will also be used as a passive recreation area. It will complement another similar wet pond feature and use located in Stage I northeast of this proposed site. These pond sites will offer opportunity for a network of linked passive open spaces. Both the passive and active open space systems will be easily accessible to residents and visitors to the neighbourhood by motorized and pedestrian links.

5 COMMUNITY VISION & DESIGN

5.1 COMMUNITY VISION

Reinforcing the Coalbanks Landing vision established in the Copperwood Stage 1 Outline Plan, this next stage in the community's development will continue to afford glimpses of Lethbridge's historic connection to coal mining. While the community's character and design will be finalized at the subdivision stage, the following is a summary of the type of elements that may be considered:

- Replicas of mining lanterns mounted on sentinel rustic stone pillars guard the entrance to the community
- Black steel structures, mimicking both the solid framework of the majestic high level bridge as well as the life-saving underground mine supports create a sense of place in past and present historic contributions
- Roundabouts created by heaped mulch beds banded with limestone, reminiscent of the coal mine slack piles, support the growth of new life as towering aspens provide dramatic roadway focal points

Copperwood Stage 2 also continues to follow and reflect the development vision of the Stage I Outline Plan and the more general vision and purpose set out in the West Lethbridge Phase II ASP i.e. by contributing to... "the creation of a vibrant , livable and diverse activity centre in West Lethbridge". The initial phase of Copperwood has set the stage for this vision through the development of a community that comprises diverse housing types, and makes provision for institutional, school and park spaces. That Copperwood has attracted, and has become home to over 1800 residents (City of Lethbridge 2011 Census) attests to its appeal as a vibrant and livable growing community in West Lethbridge.

5.2 COMMUNITY DESIGN

Stage 2 will build on the strength of this vision by continuing to provide diversity in residential form and character. A spectrum of housing types from conventional single and semi detached housing, townhousing, multiplexes and apartment style housing will be developed to satisfy the needs of a variety of lifestyles and family compositions. It will provide housing for younger and older market segments and families.

The stormwater management facility designated in the east plan area will serve both a functional and aesthetic purpose. The pond and park area will provide a vista into the community from Metis Trail. Pedestrian links created through the neighbourhood will connect these open space elements. In addition, a dedicated walkway system is proposed throughout the Plan area. This walkway system provides links to the future school site. The open space elements will create a strong sense of place within the community and provide opportunities to develop landmarks in the neighbourhood as features and amenities follow the visioning theme established in Stage 1.

6 OPEN SPACE LAND USE

6.1 OPEN SPACE

The open space network is intended to seamlessly weave through both stages of the Copperwood plan area. Entry Features, park amenities and themed elements will reflect and complete the Coalbanks Landing vision that was established for Copperwood Stage 1. Black steel pergolas will announce arrival at entries to pathways, meeting areas, parks and other amenities. Stamped concrete and paving stone pathway enhancements will guide residents throughout the community, and uniform brick veneered features of Eldorado Stone in a Cliffstone style and Cambria color will provide continuity in all aspects of theming. Refer to **Figure 6.1 Open Space Network Stage 2**.

- Entry Feature – Located on the Metis Trail Arterial Roadway cut corner, the Copperwood Stage 2 Entry Feature will continue to echo the theme elements established in Stage 1. Striking brick clad pillars and stained fence line hail entry into the community while roadways provide additional wayfinding assistance throughout the plan area. Stage 2 roundabout landscape treatments are mimicked with rock mulch, shrubs and trees, enhancing the 4 roundabouts found on the collector road. All landscape treatments will respect the City of Lethbridge Standards.
- Neighbourhood Park – This 2.53 ha parcel serves three community functions; stormwater management accented by a naturalized shoreline, east and west terminating vistas, and of course the form and function of a neighbourhood park in Copperwood. Residents will enjoy a variety of options for active or passive engagement. Interpretive nodes along connective pathway circuits can enhance the Stage 1 Coalbanks Landing theme with coal mine and historical signage related elements. This neighbourhood park will reflect the Stage 1 vision and elevate continuity in the plan area through duplication of feature elements that will announce a sense of arrival to the community.
- School Site - The School Site for Lethbridge School District #51 was established in the Copperwood Stage I Outline Plan, and the layout as included has been finalized with the School District. Stage 1 encompasses 1.74 ha of the School Site, while Stage 2 contains the remaining 4.35 ha. The site will include a modern school building and a variety of recreational amenities including playground equipment, basketball court, youth soccer pitch, soft ball field and passive flat open space. These programming requirements will meet the needs of the School District and the community. Refer to **Appendix G Lethbridge School District Site Layout**. **Figures 6.2 Proposed School Site and 6.3 Conceptual Cross Sections** represent development options for the area around the School Site. The Lethbridge School District is in agreement with the proposed development options.

- Linear Park - The linear park containing 0.19 ha will provide a strong local connector between both stages of the Copperwood community. This pedestrian and off-street cycling connection will be enhanced by asphalt pathways, irrigated turf, shrubbery and tree planting. The 0.07 ha linear park on the west boundary of the school site will provide a wide urban relief connector that also serves as a secure and visual access point to the school. All softscape treatments will reflect a continuation of the Stage 1 theme elements and will respect CPTED standards.

6.2 CONNECTIVITY

The planning process has identified a desire to create a network of linear greenspace and pathways to promote walkability and alternate transportation modes. This network is proposed as a combination of separated sidewalks with treed boulevard buffer as utilized along the collector road, and off-street pedestrian/ bikeway corridors accessed through the community's linear park. These are shown on **Figure 9.1 Preliminary Transportation Network** and **Figure 6.1 Open Space Network Stage 2**. **Figure 6.4 Open Space Area Context Plan** identifies Copperwood Stage 1 and 2 Open Space linkages.

6.3 RESERVE DEDICATION ANALYSIS

Proposed Open Space Concepts and pedestrian linkages are shown on **Figure 6.1 Open Space Network Stage 2**. It is anticipated that MR dedication will be adjusted after the City's review and any subsequent alterations that the City may require. Given the current land use statistics presented in Table 1, the developer may wish to reduce the proposed MR dedication, which currently comprises 11.6% of the gross development area.

6.4 SEASONAL WET AREAS

The developer shall submit Alberta Environment approval concurrent with any request to begin area grading on any seasonal wet area identified in supporting studies. Requirements can be found in the Provincial Wetland Restoration/Compensation Guide, Alberta Environment.

6.5 WATER QUALITY

The storm pond located in the neighbourhood park will be required to meet water quality performance objectives. At the time of detail subdivision design all wet ponds will be required to meet current City of Lethbridge water quality standards.



NTS

FIGURE 6.1 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Open Space Network

Stage 2

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

Legend

- Copperwood Stage 2 Boundary
- Local Connector Pathways
- Park Linkage
- Regional Multi-Use Pathway

- Public Building, Parks & Recreation (P-B)
- Parks and Recreation (P-R)
- Open Space (OS n/c)
- Stormwater Management Facility (Wet Pond)

- Themed Gateway Entrance to Park
- Special Park Amenity Features
- Community Entry and Theme Elements



112944453/116549024
June 26, 2022

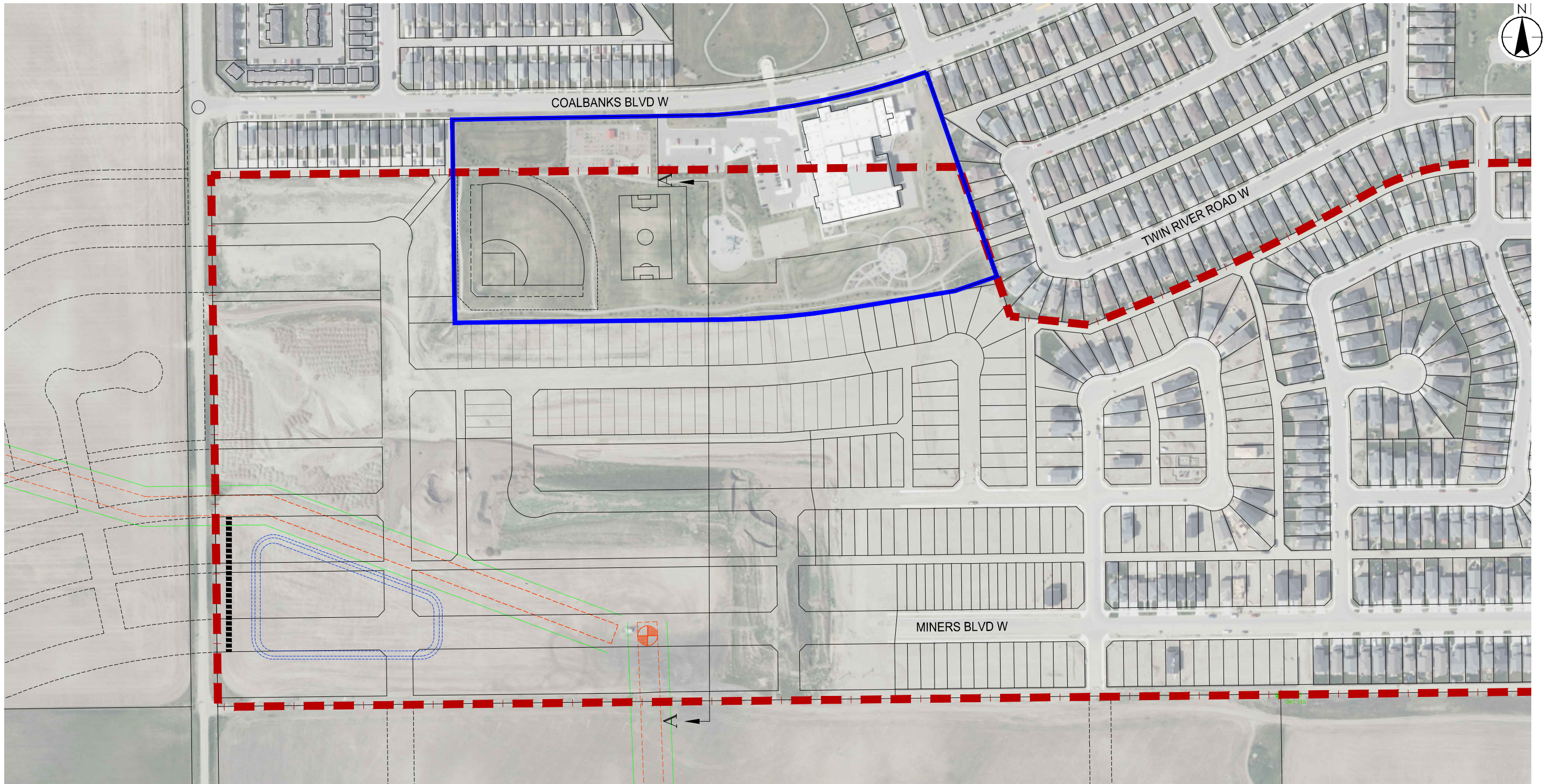


FIGURE 6.2 COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT
School Site

- Legend
- - - Copperwood Stage 2 Boundary
 - ⊕ Gas Well

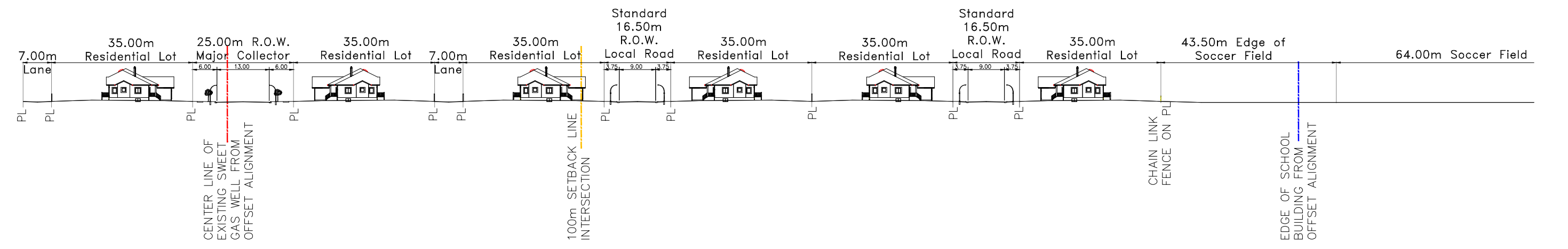
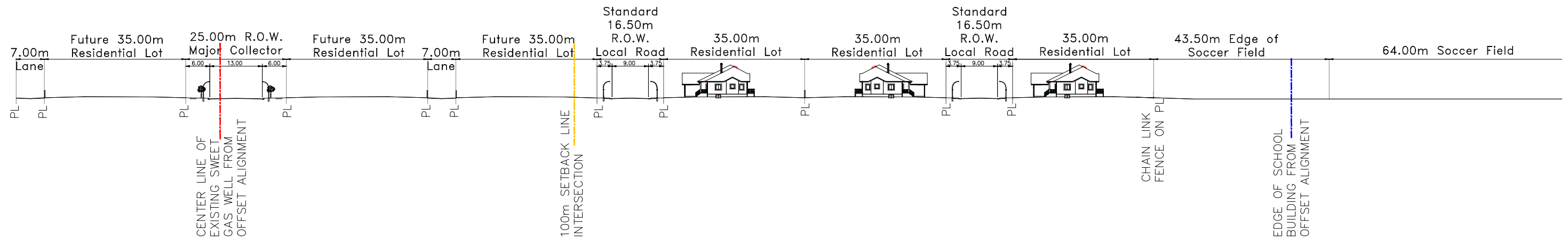
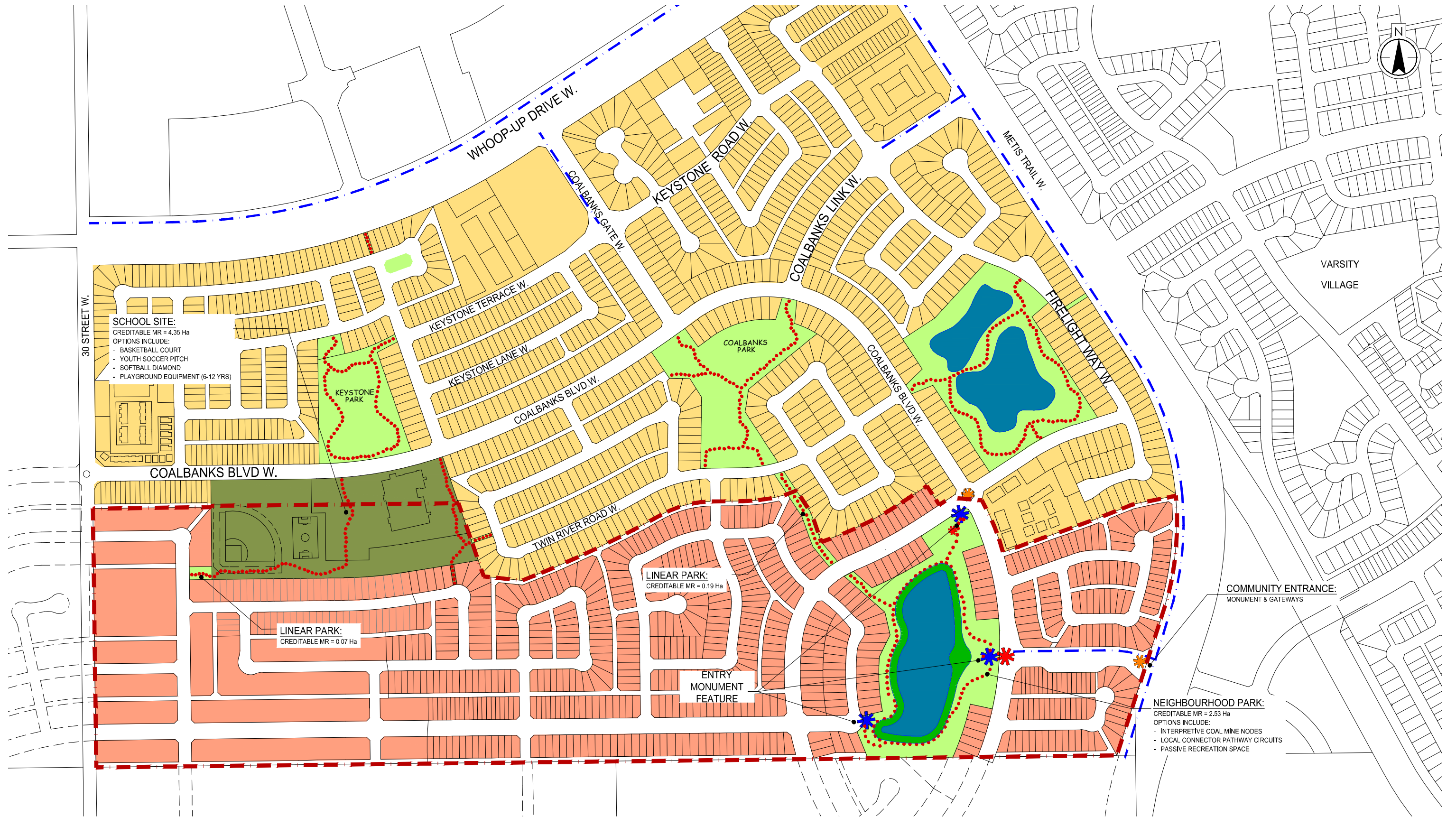


FIGURE 6.3 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT
Conceptual Cross Sections



NTS

FIGURE 6.4 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Open Space

Area Context Plan

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

Legend

- - - Copperwood Stage 2 Boundary
- Local Connector Pathways
- - - Regional Multi-Use Pathway

- Public Building, Parks & Recreation (P-B)
- Parks and Recreation (P-R)
- Open Space (OS n/c)
- Stormwater Management Facility (Wet Pond)

- ✳ Themed Gateway Entrance to Park
- ✳ Special Park Amenity Features
- ✳ Community Entry and Theme Elements

- Stage 1
- Stage 2



112944453/116549024
 June 26, 2022

7 LAND USE & DENSITY

7.1 LAND USE SUMMARY

The conceptual land use plan presented in the Gate 2 submission for Copperwood Stage 2 has been refined to show streets and lot blocks. This has allowed refinement of the gross parcel sizes for each proposed land use and development of dwelling unit and population estimates. Refer to **Figure 7.1 Proposed Land Use Designations**. **Table 7.1 Land Use and Population Estimates** presents estimated land use statistics.

MIXED USE

Mixed use development is being incorporated along Coalbrook Gate West to ensure convenient access for nearby residents of Copperwood and is anticipated to provide services and amenities such as convenience goods, day care, personal services, physical fitness (such as a gym), etc. This mixed use node will aid in strengthening the vibrancy and success of the area.

A key focus of the mixed use built form will be to enhance the public realm. Opportunities for convenience goods, shopping, and services are intended to provide street oriented entrances, and small gathering spaces within the node. Building entrances and storefronts will be oriented towards the street with architectural details that complement and enhance the surrounding neighbourhood character.

Mixed Use Lots will also provide the opportunity for a second unit to be utilized for either residential or commercial purposes. The options for properties to implement a second unit further increases the choice for affordability, multi-generational living, and other emerging household choices and needs.

LOW DENSITY

Low Density residential is defined in this Outline Plan as being single family detached homes, as well as attached homes including duplexes. Secondary Suites may be permitted provided they are located in areas with lane access, preferably on corner parcels and not on cul-de-sac bulbs where parking will not be an issue.

MEDIUM DENSITY

This Outline Plan provides medium density on the west side of the Plan Area. Attached homes including duplexes, Townhomes, Row Housing and Apartment/Multi-plex units. Townhouse units should be placed in areas with lane access where parking will not become an issue.

MEDIUM / LOW DENSITY RESIDENTIAL

A mix of Medium and Low Density is incorporated on the west side of the Plan Area to allow for greater flexibility in housing forms. The location of both Low and Medium Density housing forms should be compatible with the principles established in the preceding sections.

For more information refer to City of Lethbridge Land Use ByLaw No. **6300**.

TABLE 7.1 Land Use and Population Estimates

	Area (Ha)	Area (Ac)	% of GDA				
Gross Area	61.74	152.56					
Environmental Reserve	0.00	0.00					
Gross Developable Area (GDA)	61.74	152.56					
Public Land Use							
Public Right of Ways	17.12	42.30	27.7%				
Open Space	3.01	7.44	4.9%				
Open Space Non Credit (Includes HWL)	2.60	6.42	4.2%				
Open Space (School Site)	4.35	10.75	7.0%				
Public Subtotal	27.08	66.91	43.8%				
				Population Estimates			
Net Developable Area (NDA)	34.66	85.65		Density (UPH)	Density (UPA)	Total Units	Area Population
Residential Land Use							
Low Density Residential	30.31	74.90	49.1%	25	10	757	2119
Medium / Low Density	2.57	6.35	4.2%	25	10	64	179
Medium Density Residential	1.54	3.81	2.5%	75	30	115	218
Mixed Use	0.24	0.59	0.4%	42	17	10	19
Area Residential Sub Total	34.66	85.65	56.2%			946	2535
Total	61.74	152.56	100.0%				
				Ha	Ac		
		People/GDA		41.0	16.6		
		People/NDA		73.1	29.6		
		Unit Density/GDA		15.3	6.2		
		Unit Density/NDA		27.3	11.0		

Notes:

UPH Units per Hectare

UPA Units per Acre

HWL High Water Level

Low Density & Medium / Low Density 2.8 people/Unit (West Lethbridge ASP 2)

Mixed & Medium Density 1.9 people/Unit

Land Use Calculations exclude Neighbouring Arterial Roadways



Gross Area	61.74 ha± (152.56 ac±)
Environmental Reserve	0.00 ha± (0.00 ac±)
Gross Developable Area (GDA)	61.74 ha± (152.56 ac±)
Public Land Use	
Area	
Public Right of Ways	17.12 ha± (42.30 ac±)
Open Space	3.01 ha± (7.44 ac±)
O-S (non-credit) incl. HWL	2.60 ha± (6.42 ac±)
Open Space	4.35 ha± (10.75 ac±)
Public Sub Total	27.08 ha± (66.91 ac±)
Net Developable Area (NDA)	34.66 ha± (85.65 ac±)

Residential Land Use		Area	UPH	Total Units
Low Density	30.31 ha± (74.90 ac±)	25	757	
Medium / Low Density	2.57 ha± (6.35 ac±)	25	64	
Medium Density	1.54 ha± (3.81 ac±)	75	115	
Mixed Use	0.24 ha± (0.59 ac±)	42	10	
Residential Sub Total	34.66 ha± (85.65 ac±)		946	
Total	61.74 ha± (152.57 ac±)			
People/GDA = 41.0/ha 16.6/ac				
People/NDA = 73.1/ha 29.6/ac				
Density/GDA = 15.3/ha 6.2/ac				
Density/NDA = 27.3/ha 11.0/ac				

FIGURE 7.1 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT
Land Use Scenario

	Low Density Residential		Public Building, Parks & Recreation
	Medium / Low Density Residential		Parks and Recreation
	Medium Density Residential		Storm Water Management (TO HWL)
	Mixed Use		

8 ARCHITECTURAL STANDARDS

The built form of the development will be subject to architectural standards and design guidelines. These guidelines will be initiated and implemented by the development team and will include design guidelines such as:

- Minimum building footprints;
- Requirements for attached/detached garages;
- Fencing design and materials;
- Roofing materials;
- Diversity of building design;
- Exterior finish; and
- Landscaping requirements.

The detailed design guidelines will be developed and enforced at the subdivision stage of development. In general terms, the architectural detailing will be an extension of those standards identified and implemented in the Copperwood Stage 1 Outline Plan as well as those complimenting the Coalbanks Landing vision and community design promoted in Section 5. Architectural guidelines will encourage a seamless neighbourhood theme created by distinctive character and identity for the individual homeowners and appropriate transitions between land uses.

9 TRANSPORTATION

9.1 ARTERIAL ROAD DEVELOPMENT

The subject lands are located within the south village of the West Lethbridge Phase II Area Structure Plan. The site will be bounded to the east by the future Métis Trail. A functional design has been prepared for Métis Trail which established the alignment and grade of this arterial roadway and has been utilized for the planning of the subject lands. One connection point will be provided to Metis Trail as shown on the proposed development concept.

9.2 ROAD CLASSIFICATIONS

The proposed development concept for the subject lands includes provision for both of the collector road linkages shown in the West Lethbridge Phase II Area Structure Plan. The development concept includes a southward extension of Coalbanks Boulevard within the limits of the site. In addition, an internal linkage is provided between two points along Coalbanks Boulevard through the Stage 2 area. This “interior collector” facilitates travel within the village and access to the collector loop from areas in the centre of the village. However, intersections and traffic calming features along this connection will be provided to discourage short-cutting of high speed traffic. The traffic loading of the interior collector and proposed street classifications have been confirmed as part of the detailed Traffic Impact Assessment for the Stage 2 area. Refer to **Figure 9.1 Preliminary Transportation Network**, and **Appendix B, Traffic Impact Assessment**.

9.3 ROUNDABOUTS

In areas where roundabouts are located on residential frontages, driveway access will not be permitted and lanes will be incorporated to provide access for parking and garages. Roundabouts have been added as traffic calming measures for the Circulation Collector roadway. On street parking will be restricted within the roundabout. It is understood that parking restriction limits will be reviewed at detailed subdivision design.

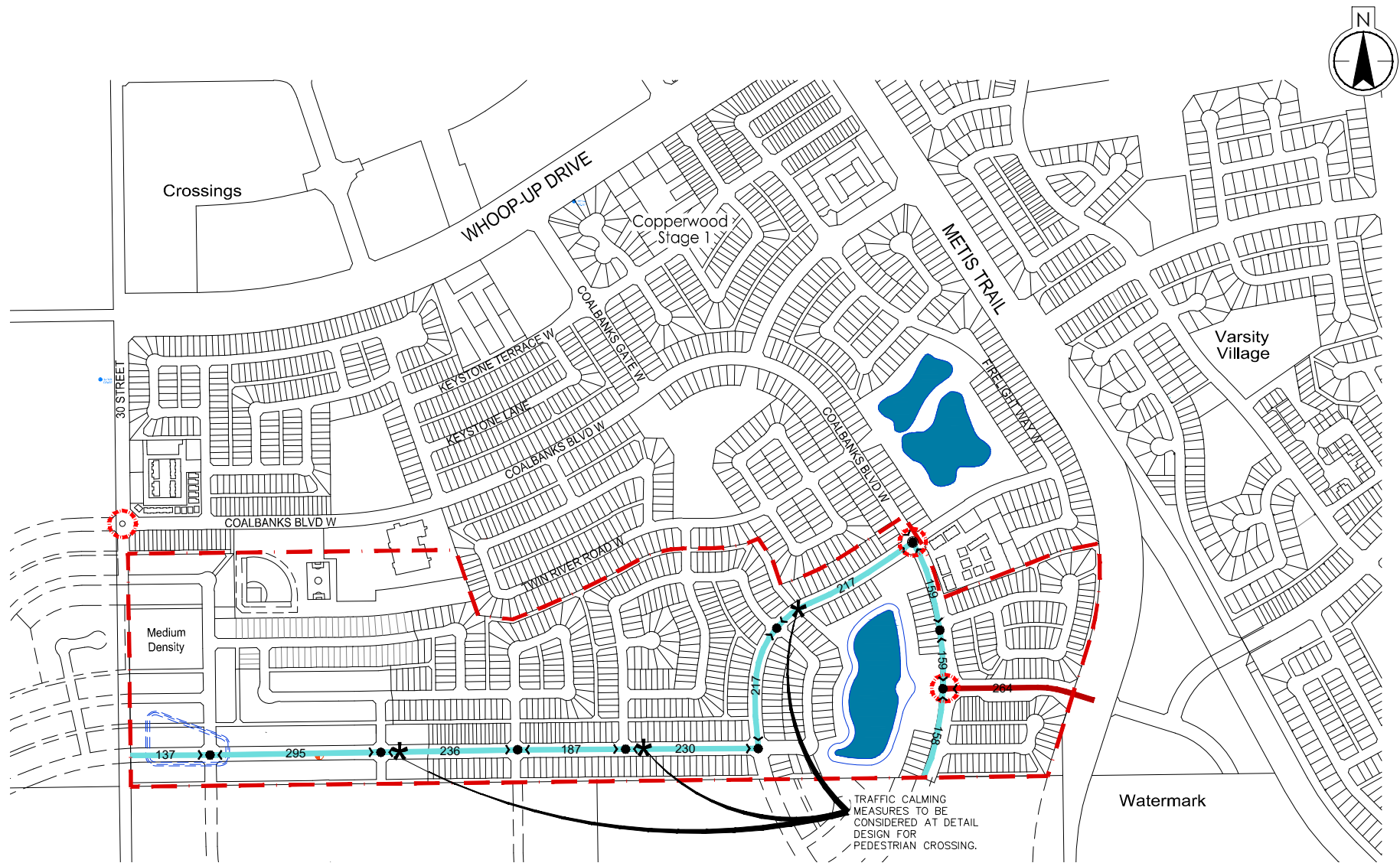
9.4 TRANSPORTATION IMPACT ASSESSMENT

In accordance with Outline Plan requirements, Stantec Consulting Ltd. has completed a Traffic Impact Assessment (TIA) to evaluate transportation impacts on proposed and existing roadways at key locations in the Copperwood Community.

The development has been assessed for the full-build horizon (assumed to occur within ten years of approval). Four external intersections which provide access to the development off of Metis Trail and Whoop-Up Drive (either directly or through Copperwood Stage 1) have been analyzed. In addition, 10 internal intersections located within either Stage 1 or Stage 2 of Copperwood has been analyzed.

The objectives of the analysis included estimating the impacts of vehicular traffic on the roadway system at the full-build horizon, and recommending appropriate improvements to accommodate the associated traffic volumes. The scope of the study was established through consultation with the City of Lethbridge Traffic Engineering and Transportation Planning Manager using the City of Lethbridge TIA guidelines as a reference.

The analysis contained within this TIA demonstrates that, with some conventional infrastructure modifications, the surrounding road network will be able to support the development of the Copperwood Stage 2 Outline Plan area.



NTS

FIGURE 9.1 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Preliminary Transportation Network

Legend

- - - Copperwood Stage 2 Boundary
- Community Entrance/Super Collector
- Major Collector
- Minor Collector

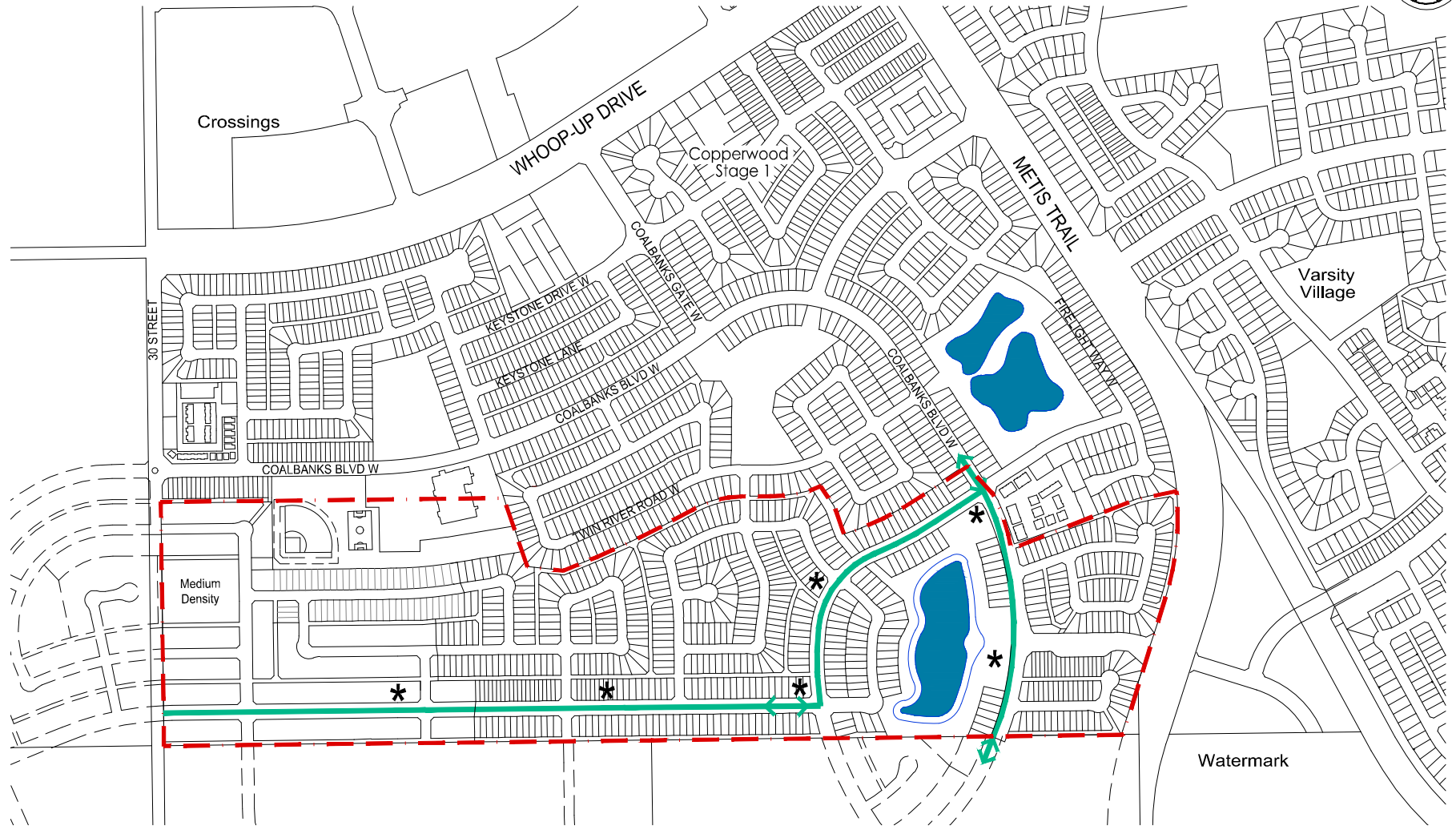
- <100m> ● Intersection Spacing
- ⊙ Roundabout



112944453/116549024

June 26, 2022




PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.



NTS

FIGURE 10.1 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Preliminary Transit & Bus Stops

- Legend
-  Copperwood Stage 2 Boundary
 -  Transit Route (Bi-Directional)
 -  Proposed Bus Stop



11294453/116549024

June 26, 2022

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

10 TRANSIT & MAILBOX SERVICES

10.1 TRANSIT ROUTES

Transit routes are preferably placed on public collector roadways. A route may be placed on a local road either temporarily or permanently depending on the circumstance and at the discretion of the Transit Manager. Public collector roadways will be designed to meet the current City of Lethbridge Design Standards to ensure adequate space and durability for transit vehicle passage. Transit routes and stop locations will be determined as the neighbourhood develops and may be subject to change. Transit Standards may change between the OLP approval and the implementation of a transit route in a new neighbourhood.

10.2 COMMUNITY MAIL BOX LOCATIONS

The final location of community mailboxes will be determined in conjunction with Canada Post at the time of detailed design. Community mailboxes are typically located adjacent the City sidewalk along the long frontage of corner lots, or along the opening to park space. Transit bus stops will not be combined with community mailbox sites.

11 SITE SERVICING

11.1 STORM WATER MANAGEMENT

Background Information

Where practical, catchment areas have been defined by natural topography in an effort to minimize excessive earthwork. However, the natural topography within the Copperwood Stage 2 area is characterized as hummocky and has many localized hills and depressions. As a result, substantial earth work will be required to facilitate overland drainage.

Catchment boundaries extend to the centerline of the adjacent arterial roadways to allow management of the combined runoff from the development and arterials. Storm water treatment will be accomplished through the provision of wet ponds designed in accordance with Alberta Environment Guidelines.

The City of Lethbridge has indicated that downstream capacity constraints require that the stormwater management system for Copperwood Stage 2 provide a zero release rate for storm events up to and including the 1:100 return period event. Stormwater must be detained within the site indefinitely until the downstream system has capacity to convey the detained stormwater to the Oldman River through existing outfalls. Detained stormwater will be manually released by City of Lethbridge Operations Staff following passage of the storm.

The City has indicated that storage of 1000m³/ha should be allowed for at the Outline Plan stage of planning. This is a volume equivalent to the 90% of the 1:100 year, 24 hour rainfall volume (~110mm rainfall). This is based on no allowance for initial abstraction, depression storage or infiltration.

Design Assumptions

The major and minor storm drainage systems for the Copperwood Stage 2 Outline Plan area will be designed in accordance with Alberta Environment and City of Lethbridge Design Standards. Minor storm drainage systems will be designed to accommodate runoff resulting from a 1:5 year return period storm event. The major storm drainage systems will be designed to accommodate runoff resulting from a 1:100 year return period storm event and not exceed AENV guidelines for safe velocities and depths of flow.

Design Criteria used for the major and minor storm sewer systems are:

- 1000m³/ha of detention storage
- 200L/s/ha for Major System Flows
- 90 L/s/ha for Minor System Flows

Major system flow routes will incorporate trapped lows at strategic locations. Trapped low areas will:

- Increase surface run-off capture
- Provide for energy dissipation during extreme rain fall events ("stilling" basins)
- Allow for the practical creation of overland flow routes given localized topographical constraints.
- Meet City of Lethbridge design guidelines for maximum depth of 300mm.

Stormwater detention ponds will be designed to accommodate runoff from the 1:100 year, 24 hour rain event as noted above. Release of stormwater from detention ponds will be by manual operation following the storm event.

Proposed Storm Water Management System

The Copperwood Stage 2 Outline Plan area has been divided into three storm drainage catchments that drain into two proposed stormwater management ponds and Copperwood Stage 1. The ponds and catchment areas are identified on **Figure 11.1 Storm Water Management and Connection Points**.

As shown in **Table 11.1**, the ponds are capable of accommodating the anticipated runoff volume from the development area. A description of the catchment area characteristics and pond design criteria for the three stormwater catchments and two new stormwater management ponds appears in the following sections and **Table 11.1 Pond Statistics**.

Major Storm System and Minor Storm System flows have been summarized in **Table 11.2 Minor and Major Storm Flows**.

Zone A

Zone A includes approximately 18.3 ha of Land on the west side of the Stage 2 Plan Area. Currently, the natural drainage of this area flows to the north and south west of this site. It has been understood that post development drainage of this area must avoid Stage 1 Storm Water Management Facilities and conveyance systems. Therefore the site shall be graded as indicated and post development flows will be directed to the southwest corner of Copperwood Stage 2.

Ultimately, it is expected that a new storm sewer outfall will be constructed in the Oldman River West of Copperwood in order to serve this area of Copperwood and future developments to the south and west.

In the interim, partial development of this zone could be facilitated by the construction of a temporary drypond in the south west corner of Stage 2. Storm Water Pumping or the establishment of a new storm sewer trunk of sufficient depth would be required to drain this pond. In the event that a pumping option is pursued, off-peak discharge of Pond A could be conveyed to Copperwood Stage 1.

The developer of the temporary dry pond land will be responsible for: 1) creating a temporary facility that is landscaped to City of Lethbridge standards; and 2) the costs of converting the area to the ultimate design as per the Outline Plan. At the time of development of the temporary pond, boundary conditions will be put in place so the City has an easement to operate and maintain the facility; and so that the pond can be relocated or converted to a permanent facility without cost to the City or other developers."

Zone B

Zone B includes the majority of the Copperwood Stage 2 Outline Plan area (approximately 43.7ha) which naturally drains eastward towards Métis Trail. This Zone will include a wet pond (Pond B) near the eastern end of the site to detain stormwater runoff and provide water quality treatment. The proposed high water level of this Pond B is approximately 931.5m. Discharge from the pond will be by means of a gravity sewer installed from the pond to Métis Trail. This connection must occur downstream of the Stage 1 Pond Control Structure. Pond B will be designed with zero release rate and a manually operated outlet. No major or minor system flows from this area will be directed to the Copperwood Stage 1 systems.

Zone C: Stage 1 Outline Plan

The Copperwood Stage 1 Outline Plan identified a future catchment of 4.62 ha. that would be managed within the Stage 1 Storm System. A change to the boundary definition in Stage 2 is a result of finalizing a Stage 2 layout and a school site layout with the Lethbridge School District.

The change in the shape of the drainage boundary allows for the continued development of Coalbanks Boulevard in Stage 1 and maintains drainage area accounted for in the Stage 1 Outline Plan. A detailed analysis of Zone C is found in the Copperwood Stage 1 Outline Plan.

Major System Flows

1. The final design of overland flow routes must be confirmed at subdivision and detailed design, and must meet Alberta Environment Guidelines with regard to safe flow depth and velocity.

Table 11.1: Pond Statistics

Pond	Pond Type	Catchment Area	Active Storage Pond Volume
A	Dry/Interim	18.3 ha	18 300m ³
B	Wet	43.7 ha	43 700m ³

Table 11.2: Minor & Major Storm Flows

Catchment		Sub Catchment*		Minor System Flow m ³ /s	Major System Flow m ³ /s
ID	Area (Ha)	ID	Area (Ha)		
A	18.3	A1	2.1	0.2	0.4
		A2	3.9	0.4	0.8
		A3	12.3	1.1	2.5
B	43.7	B1	10.7	0.9	2.1
		B2	1.1	0.1	0.2
		B3	11.1	1.0	2.2
		B4	15.1	1.4	3.0**

* Sub catchment area excludes ponds and land that directly drains to ponds.

** The conveyance of 3.0m³/s can be accomplished by construction a major collector cross-section at 0.90% grade. Detailed drainage design at the subdivision stage should review other applicable alternatives.

11.2 SANITARY SERVICING

Background Information

Previous planning documents have indicated that substantial upgrades or new installations will be required to the sanitary sewer collection system on the City of Lethbridge's West Side in order to provide adequate service to future developments. Recent improvements to the sanitary sewer system have included the extension of trunk sanitary sewers along Whoop-Up Drive and the future Métis Trail. These sanitary sewer extensions have been driven by previous expansion of the City and specifically, development of The Crossings and Copperwood Stage 1. It is understood that the City has plans to increase capacity in the sanitary sewerage siphons which cross the Oldman River and will convey wastewater generated in these growth areas to the City of Lethbridge Wastewater Treatment Facility. Wastewater collection for the Copperwood Stage 2 area will utilize the trunk sanitary sewer mains on Whoop-Up Drive and Métis Trail.

Design Standards

City of Lethbridge Design Standards for residential flows has been used for analysis.

Dry Weather Flow: 400L/cap/day

Wet Weather Flow: 500L/cap/day

Infiltration: 150L/cap/day

Harmon's Peaking Factor: $[14 / (4 + \sqrt{P})] + 1$

Population Assumptions and Associated Flows

Population statistics for Copperwood Stage 2 from **Table 7.1 Land Use and Population Estimates** indicate a total residential population of **2535** people. The land use analysis indicates assumed dwelling unit densities and corresponding population estimates for each land use. The total estimated population of the development divided by a Gross Development Area excluding arterial roads yields an overall population density of **41.0** persons/ha, which has been used for the purposes of sewage generation rate estimation in the following sections.

Copperwood Stage 2 Sewage Collection System

Sanitary wastewater collection within the Copperwood Stage 2 area is divided by a high point in the existing topography. The high point in the topography will be maintained in the proposed grading for the site in approximately the same location. The eastern portion of the site naturally drains toward Métis trail. The western portion of the Stage 2 area naturally drains towards the southwest and towards 30 Street West.

Previous planning documents, particularly the Copperwood Stage 1 Outline Plan, describe boundary conditions along the northern edge of the Stage 2 area. In this planning document, service connections for Stage 2 were planned on the east and west side of the development as indicated on **Figure 11.2 Sanitary Servicing and Connection Points**; it is understood that sanitary sewer upgrades in Metis Trail and other areas must be completed to accommodate sewage flows from Copperwood Stage 2.

For the purpose of the preliminary evaluation, three distinct sewersheds have been identified within the Stage 2 Outline Plan Area. **Sewershed A** includes areas west of the high point in the existing topography. This sewershed will drain to Copperwood Stage 1 as indicated on **Figure 11.2 Sanitary Servicing and Connection Points**. **Sewershed B** will drain to Métis Trail and will contribute wastewater to the connection point located at the intersection of Coalbanks Boulevard West and Firelight Way West. **Sewershed C** is currently not serviceable due to the depths of existing sewers in Copperwood Stage 1. It is anticipated that a new trunk sewer will need to be extended into the area to service these lands.

The sanitary wastewater collection system connection points are shown on **Figure 11.2 Sanitary Servicing and Connection Points** and estimated sewage flows are presented in **Table 11.3 – Sanitary Sewage Flow Estimates** below.

Table 11.3-Sanitary Sewage Flow Estimates

Sewershed	Gross Area (Ha)	Population	Peak Flow (L/s)
A	11.7	472	12
B	43.2	1743	42
C	6.8	310	8

11.3 WATER SERVICING

Background Information

Potable water service to the Copperwood Stage 2 Outline Plan area will be primarily provided from the existing water reservoir and pumping station in the Varsity Village neighborhood of West Lethbridge. The development of a new Treated Water Reservoir and Pumping Station located on the north side of Garry Drive within the Country Meadows Outline Plan area will provide a supplemental supply of water to all of West Lethbridge by means of a large diameter (400-600mm) primary distribution main network which will be located within the right-of-way of the surrounding arterial roads.

Design Standards

The Following acceptable delivery pressures are stated in the City of Lethbridge Design Standards, *Level of Service Objectives*:

- No less than 310 kPa (45 psi) during peak hour demand
- No less than 345 kPa (50 psi) at maximum day demand
- Maximum delivery pressure will not exceed 620 kPa (90 psi)

Internal Distribution Network

The water distribution network within the Copperwood Stage 2 Outline Plan area will generally follow the layout of the street network. Distribution piping within the subject will range from 200 to 400mm in diameter. Proposed connection points to future and existing water systems have been indicated on **Figure 11.3 Water Servicing & Connection Points**.

Total water demand within the Copperwood Stage 2 Outline Plan Area has been estimated using the estimated population from **Table 7.1 Land Use and Population Estimates** above. Average daily, maximum day, and peak hourly potable water demands are presented in **Table 11.4 Estimated Water Demands** below.

Table 11.4: Estimated Water Demands

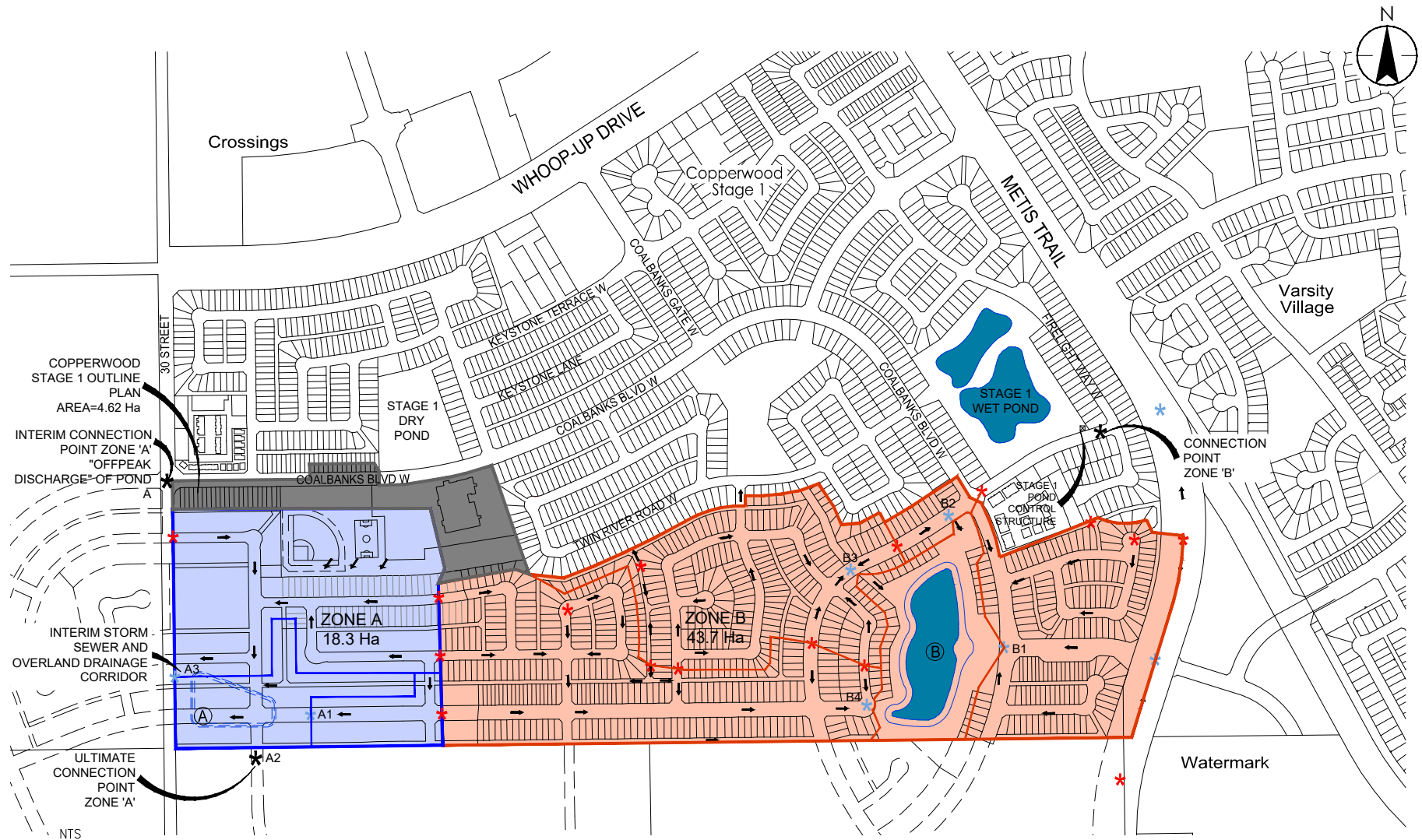
Average Day Demand (415L/cap/day)	1.05 ML/day
Maximum Day Demand (2.2 x ADD*)	2.31 ML/day
Peak Hour (3.5 x ADD)	3.68 ML/day

*ADD – Average Day Demand

Note: Water Usage based on an estimated population of **2535** from **Table 7.1 Land Use and Population Estimates**.

11.4 EXISTING INFRASTRUCTURE

The existing gas pipeline and gas well in the SW corner of the plan area will remain in place until such time as it is decommissioned. However, should timing of development reach the gas pipeline before it is decommissioned the Developer would work with the City and the pipeline owner to come up with solutions that will allow for development in a safe and logical manner.



NTS

FIGURE 11.1 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Storm Water Management

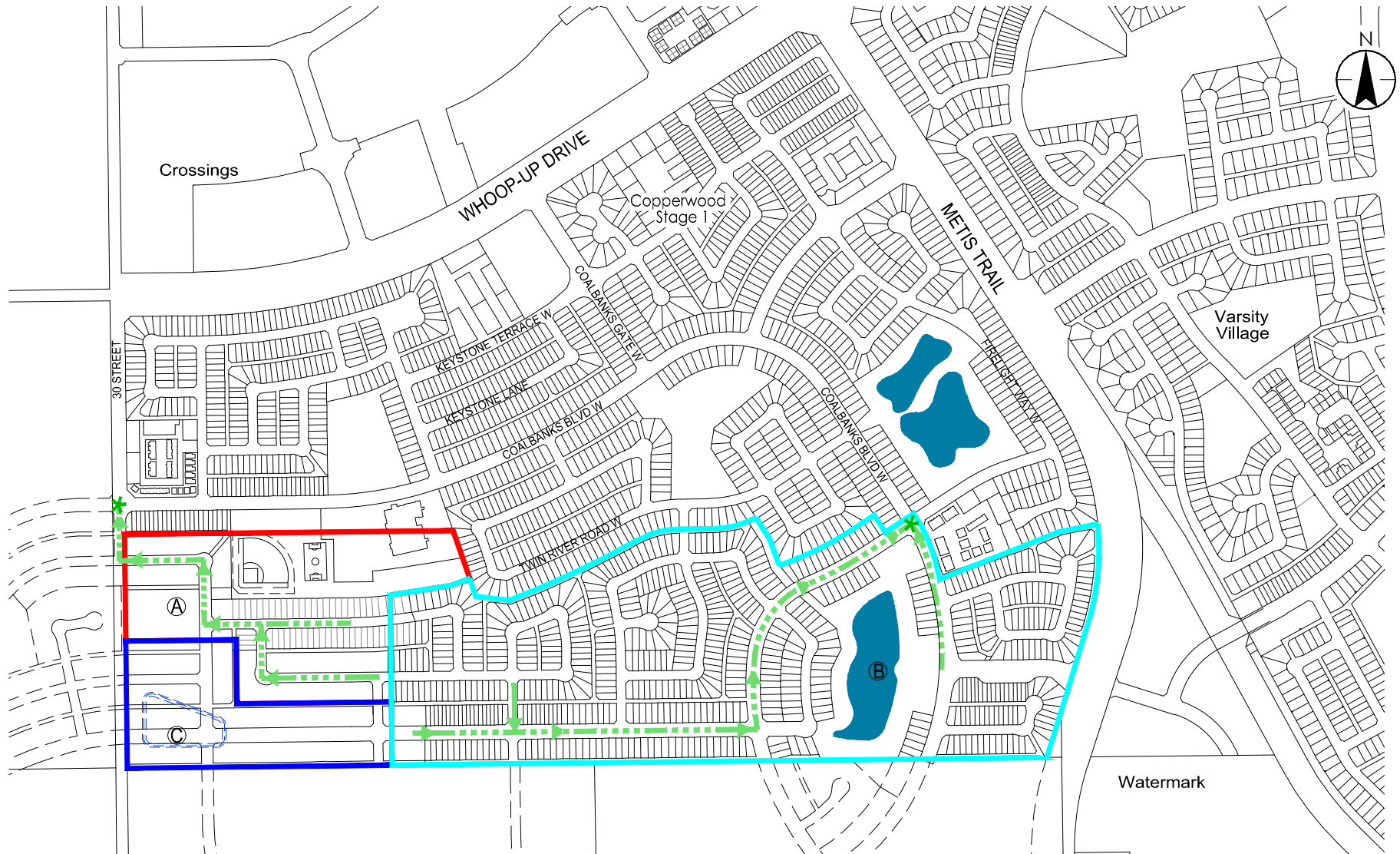
& Connection Points

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

- Legend
- Flow Direction
 - * High Point
 - * Low Point
 - (A) Pond Identification
 - * Sewer Connection Points



112944453/116549024
June 26, 2022



NTS

FIGURE 11.2 COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Sanitary Servicing

& Connection Points

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

Legend

- Sewershed Boundary A
- Sewershed Boundary B
- Sewershed Boundary C
- - - Proposed Sewer Trunk



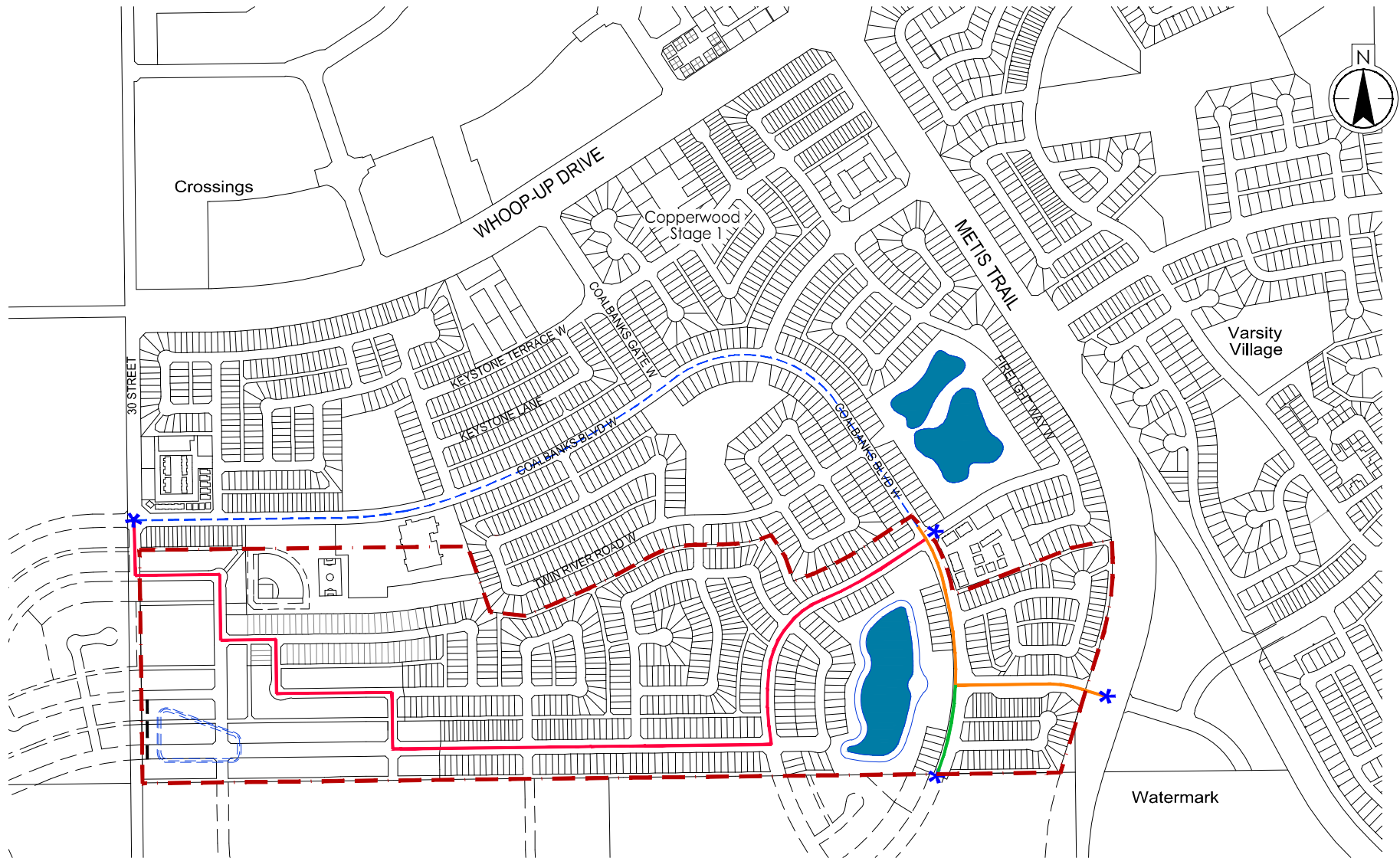
Sewershed Label



Connection to Existing Sewer Trunk



112944453/116549024
June 26, 2022



NTS

FIGURE 11.3 | COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT

Water Servicing

& Connection Points

PREPARED FOR: DAYTONA URBAN DEVELOPMENT CORP.

Legend

- - - Copperwood Stage 2 Boundary
- Proposed 250Ø
- Proposed 300Ø
- Proposed 400Ø
- - - Existing Water Distribution
- * Connection to Future Water Trunk



112944453/116549024
June 26, 2022

12 DEVELOPMENT STAGING

Figure 12.1, Development Staging – illustrates the proposed Development Staging for Copperwood Stage 2. Proposed Staging is based on the logical extension of existing infrastructure, and the construction of critical new infrastructure including storm water management facilities. The City of Lethbridge has indicated that partial completion of phases that has the effect of delaying adjacent owners from beginning development is unacceptable.

The most logical location for the start of development into Copperwood Stage 2 is the extension of Coalbanks Boulevard on the east side of Stage 1. However, development radiating from the west side of Stage 1 and the proposed Stage 2 Metis Trail access may provide secondary growth options when infrastructure is extended to these areas.

GENERAL PHASING REQUIREMENTS

Development must consider City of Lethbridge Standards with regard to infrastructure looping and access.

Water Distribution: Phased construction must meet City of Lethbridge standards with regard to water looping and hydrant spacing.

Sanitary and Storm Sewer System: Phased Construction should proceed logically from previously constructed phases.

Storm Water Management Facilities: Ponds and pond outlet must be constructed concurrently with the first phase requiring the facility. All phases will be provided overland flow routes to the ponds.

Phase Sizing: Phase sizes will be determined based on market conditions, and should follow the logical extension of existing infrastructure. Design and Installation of Offsite Infrastructure may be required in order to facilitate development. Proposed phasing may require the establishment of easements at the time of subdivision to complete appropriate looping whether permanent or temporary.

Development Service Areas

(Refer to Figure 12.1)

Service Area A

General: Growth in this servicing area will commence with connections to T1, W1 and S1 on Coalbanks Boulevard West.

Water Distribution: Under current City standards, water looping will be required for an initial phase that exceeds 70 lots. Should phases developing from W1 exceed this number, the next logical water connection that will be required is represented by W2. With regard to expansion into the western 1/3 of Zone A, a water loop extending from area C1 may be required should any dead end loop service more than 70 lots.

Sanitary Sewer: a gravity sanitary sewer system, extending from S1, can service Area A.

Storm Water Management: A permanent wet pond facility will be required to service Area A along with an outlet storm line that connects to the Metis Trail Storm Sewer

Transportation: T1 will be the first transportation access required for development in this zone. Access T2 will be required for expansion beyond the first phase that develops west of Phase 1.

Service Area B

General: Growth in this servicing area will commence with connections to T1, W1 and S1 on Coalbanks Boulevard West.

Water Distribution: Under current City standards, water looping will be required for an initial phase that exceeds 70 lots. Should phases developing from W1 exceed this number, the next logical water connections that will be required is represented by W3.

Sanitary Sewer: a gravity sanitary sewer system, extending from S1, can service Area B.

Storm Management: The completion of the Wet Pond will be required to service this area

Transportation: a secondary access to Metis Trail via T3 should be considered when 320 units are completed within areas A & B. This assessment has been made based upon allowing Coalbanks Link West in Copperwood Stage 1 to operate at a maximum of 8000 vehicles per day. Excluding Stage 2 contributions, the Stage 1 full build out estimated that this stretch of road would carry approximately 4800 vehicles per day.

Service Area C

General: Growth in this servicing area will extend from T4, W4 and S2 at the West end of Coalbanks Boulevard.

Water Distribution: Under current City standards, water looping will be required for an initial phase that exceeds 70 lots. Should phases developing east from W4 exceed this number, the next logical water connection that will be required would be to Area A.

Sanitary Sewer: a gravity sewer extending from Coalbanks Boulevard will be required to service Area C1. Area C2 will be serviced from a future sanitary system that will provide service to node S3.

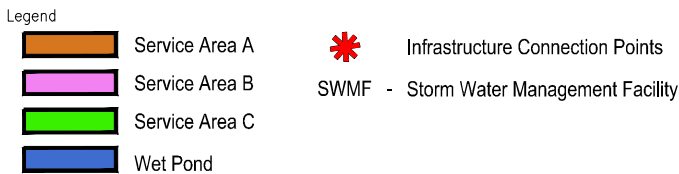
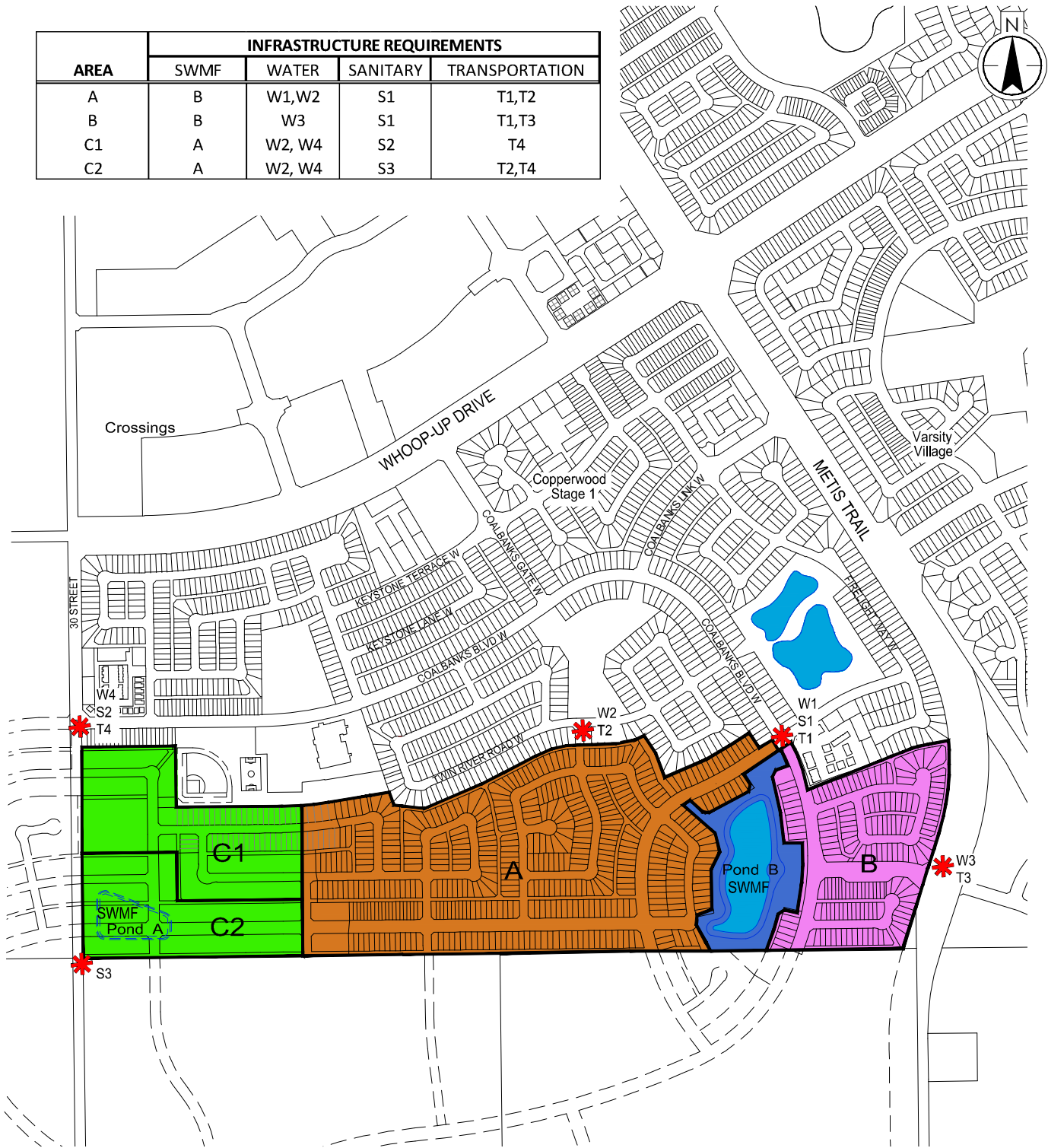
Storm Management: The completion of an interim storm water management facility will be required to service Area C1. The removal of this facility and the completion of a future facility SW of Copperwood Stage 2 will be required to service Area C2.

Transportation: the most logical point to C1 will be a connection from T4; however, road networks to A may provide alternative access solutions in the initial stages of development in Service Area C.

BOUNDARY CONDITIONS

The details of boundary conditions for cost sharing of the collector roadways, stormwater management facilities and their appropriate recoveries will be negotiated and reflected in future Service Agreements.

AREA	INFRASTRUCTURE REQUIREMENTS			
	SWMF	WATER	SANITARY	TRANSPORTATION
A	B	W1,W2	S1	T1,T2
B	B	W3	S1	T1,T3
C1	A	W2, W4	S2	T4
C2	A	W2, W4	S3	T2,T4



NTS

FIGURE 12.1 COPPERWOOD STAGE 2 OUTLINE PLAN AMENDMENT
Development Staging Areas



11294453/116549024
 June 26, 2022

13 FIRE PROTECTION

Public roadways will be designed to meet the current City of Lethbridge Design Standards to ensure safe emergency vehicle passage.

The City of Lethbridge “Emergency Response Time Modeling” for Copperwood Stage 2 will need to be reviewed at the time of subdivision in order to meet applicable provincial regulations. Refer to **Appendix H, High Intensity Fire Response Analysis City of Lethbridge.**

14 SUSTAINABILITY

Copperwood Stage 2 has incorporated principles of sustainable design into the community. A variety of land use districts have been selected throughout the plan area to accommodate a mix of housing styles to address a wide range of market demographics. The land uses also provide opportunities to implement innovative design and creativity.

A comprehensive open space network achieves connectivity while creating a sense of place which promotes active and passive recreational opportunities as well as promoting alternative modes of transportation. The pedestrian and pathway network constructed of sustainable materials connects future residents with the amenities to the north. Bicycling friendly pathways and amenities will further enhance opportunities for neighbourhood socializing and interaction.

In the interest of sustainable development, high maintenance park areas could be minimized and xeriscaping principles may be used to create an aesthetic and functional open space network. Consideration of different lighting forms and power sources may be initiated as well as provisions for recycling sites could be explored.

The layout of the community was strategically designed to minimize grading, including locating storm water management facilities in natural low areas. Storm Water Management Facilities will be utilized to irrigate open space areas along with make-up water from the Lethbridge Northern Irrigation District: Refer to **Appendix G: Lethbridge Northern Irrigation District Water Conveyance Letter**.

15 CONCLUSION

The Copperwood Stage 2 Outline Plan provides a logical extension to development in the Copperwood Stage 1 community. The design of the Outline Plan conforms to the policies and intent of the West Lethbridge Phase 2 Area Structure Plan.

Daytona Urban Development Corp., respectfully requests Outline Plan approval by **Lethbridge City Council** and subsequent Land Use approval to accommodate commencement of the Copperwood Stage 2 development.

The Copperwood Outline Plan was approved by **Lethbridge City Council** on
